

## CLAIMS

1. A method of establishing at least one neurotransmitter status point  
5 in a subject, comprising the steps of determining a subject's health status with respect to neurotransmitter dysfunction, performing an assay of a body fluid of the subject to determine a neurotransmitter level in the fluid, and defining the assayed neurotransmitter level in the fluid as at least one neurotransmitter status point.  
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2. The method of claim 1, wherein the subject is a human being.
3. The method of claim 1, wherein the step of determining the  
subject's health status is implemented by a medical examination.  
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4. The method of claim 1, wherein health status is determined with respect to the group of dysfunction consisting of obesity, panic disorder, obsessive compulsive disorder, and Parkinson's disease.
- 20 5. The method of claim 1, wherein the step of assaying is implemented via the subject's serum fluid.

6. The method of claim 1, wherein the step of assaying is implemented via the subject's saliva fluid.

7. The method of claim 1, wherein the step of assaying is implemented via the subject's urine fluid.

8. The method of claim 7, wherein the urine for assay is collected from the subject approximately 5-6 hours before the subject's bedtime.

9. The method of claim 7, wherein the step of assaying measures neurotransmitter in micrograms of neurotransmitter per gram of creatinine in urine.

10. The method of claim 1, wherein the neurotransmitter is serotonin.

11. The method of claim 1, wherein the neurotransmitter is catecholamine.

12. The method of claim 1, wherein the neurotransmitter is serotonin and catecholamine.

13. The method of claim 1, wherein the at least one neurotransmitter status point is a baseline reference point.

14. The method of claim 13, wherein the baseline reference point is within a reference range.

5 15. The method of claim 14, wherein the reference range for concentrations of serotonin neurotransmitter is approximately 100-250 micrograms of neurotransmitter per gram of creatinine.

10 16. The method of claim 14, wherein the reference range of dopamine amino acid precursor of catecholamine neurotransmitter is approximately 100-250 micrograms of neurotransmitter per gram of creatinine.

15 17. The method of claim 14, wherein the reference range of norepinephrine amino acid precursor of catecholamine neurotransmitter is approximately 25-75 micrograms of neurotransmitter per gram of creatinine.

18. The method of claim 14, wherein the reference range of epinephrine amino acid precursor of catecholamine neurotransmitter is approximately 5-13 micrograms of neurotransmitter per gram of creatinine.

20 19. The method of claim 14, wherein the baseline reference point is further within an optimal range.

20. The method of claim 19, wherein the optimal range for concentrations of serotonin neurotransmitter is approximately 175-225 micrograms of neurotransmitter per gram of creatinine.

5 21. The method of claim 19, wherein the optimal range of dopamine amino acid precursor of catecholamine neurotransmitter is approximately 125-175 micrograms of neurotransmitter per gram of creatinine.

22. The method of claim 19, wherein the optimal range of  
10 norepinephrine amino acid precursor of catecholamine neurotransmitter is approximately 30-55 micrograms of neurotransmitter per gram of creatinine.

23. The method of claim 19, wherein the optimal range of epinephrine amino acid precursor of catecholamine neurotransmitter is approximately 8-12  
15 micrograms of neurotransmitter per gram of creatinine.

24. The method of claim 13, wherein the baseline reference point is outside a reference range.

20 25. The method of claim 1, wherein the at least one neurotransmitter status point is a therapeutic point.

26. The method of claim 25, wherein the at least one therapeutic point is within a therapeutic range of concentrations of neurotransmitter.

27. The method of claim 26, wherein the therapeutic range for concentrations of serotonin neurotransmitter is approximately 1,200-2,400 micrograms of neurotransmitter per gram of creatinine, for treatment of obesity.

28. The method of claim 26, wherein the therapeutic range for concentrations of serotonin neurotransmitter is approximately 250-1,200 micrograms of neurotransmitter per gram of creatinine, for treatment related to panic disorder and obsessive compulsive disorder.

29. The method of claim 26, wherein the therapeutic range of dopamine amino acid precursor of catecholamine neurotransmitter is approximately 200-500 micrograms of neurotransmitter per gram of creatinine.

30. The method of claim 26, wherein the therapeutic range of dopamine amino acid precursor of catecholamine neurotransmitter is approximately <20,000 micrograms of neurotransmitter per gram of creatinine for treatment of Parkinsonism.

31. The method of claim 26, wherein the therapeutic range of norepinephrine amino acid precursor of catecholamine neurotransmitter is approximately 35-70 micrograms of neurotransmitter per gram of creatinine.

5 32. The method of claim 26, wherein the therapeutic range of epinephrine amino acid precursor of catecholamine neurotransmitter is approximately 8-13 micrograms of neurotransmitter per gram of creatinine.

10 33. The method of claim 25, further comprising the step of treating the subject after the assay step, and wherein the administration step is repeated with increasing amounts of amino acid precursors, each administration step being followed by an assay step, and further comprising the step of graphing neurotransmitter level over time.

15 34. The method of claim 33, further comprising the step of determining an inflection point on the graph of neurotransmitter level.

35. The method of claim 34, wherein the inflection point is used to determine the therapeutic range.

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36. A method of establishing at least one neurotransmitter status point in a human being, comprising the steps of:

a. determining a subject's health status with respect to catecholamine-serotonin system neurotransmitter dysfunction by medical examination for symptoms of dysfunction;

b. performing an assay of a body fluid of the subject to determine a catecholamine-serotonin system neurotransmitter level in the fluid, the assay being a urinary assay and the urine sample being collected from the subject about 5-6 hours before the subject's bedtime; and

c. defining the assayed catecholamine-serotonin system neurotransmitter level in the fluid as at least one neurotransmitter status point.

37. A method of treating a subject for neurotransmitter dysfunction, comprising the steps of performing a first assay of a body fluid of a subject to determine a baseline neurotransmitter level in the body fluid, administering an amino acid precursor of a neurotransmitter to the subject, administering a second assay of a body fluid of the subject to determine whether the neurotransmitter level in the body fluid is within a predetermined therapeutic range of neurotransmitter levels.

38. The method of claim 37, wherein the subject is a human being, and wherein health status is determined with respect to the group of dysfunctions consisting of obesity, panic disorder, obsessive compulsive disorder, and Parkinson's disease.

39. The method of claim 38, wherein the step of assaying is implemented via the subject's serum fluid.

5 40. The method of claim 37, wherein the step of assaying is implemented via the subject's saliva fluid.

41. The method of claim 37, wherein the step of assaying is implemented via the subject's urine fluid.

10 42. The method of claim 41, wherein the urine for assay is collected from the subject approximately 5-6 hours before the subject's bedtime.

43. The method of claim 41, wherein the step of assaying measures  
15 neurotransmitter in micrograms of neurotransmitter per gram of creatinine in urine.

44. The method of claim 43, wherein the neurotransmitter is selected  
from the group of neurotransmitters consisting of serotonin, catecholamine, and a  
20 combination of serotonin and catecholamine.



45. The method of claim 44, wherein the therapeutic range for concentrations of serotonin neurotransmitter is approximately 1,200-2,400 micrograms of neurotransmitter per gram of creatinine, for treatment of obesity.

5 46. The method of claim 44, wherein the therapeutic range for concentrations of serotonin neurotransmitter is approximately 250-1,200 micrograms of neurotransmitter per gram of creatinine, for treatment related to panic disorder and obsessive compulsive disorder.

10 47. The method of claim 44, wherein the therapeutic range of dopamine amino acid precursor of catecholamine neurotransmitter is approximately 200-500 micrograms of neurotransmitter per gram of creatinine.

15 48. The method of claim 44, wherein the therapeutic range of dopamine amino acid precursor of catecholamine neurotransmitter is approximately <20,000 micrograms of neurotransmitter per gram of creatinine for treatment of Parkinsonism.

20 49. The method of claim 44, wherein the therapeutic range of norepinephrine amino acid precursor of catecholamine neurotransmitter is approximately 35-70 micrograms of neurotransmitter per gram of creatinine.

50. The method of claim 44, wherein the therapeutic range of epinephrine amino acid precursor of catecholamine neurotransmitter is approximately 8-13 micrograms of neurotransmitter per gram of creatinine.

5 51. The method of claim 43, wherein the administration step is repeated with increasing amounts of amino acid precursors, each administration step being followed by an assay step, and further comprising the step of graphing neurotransmitter level over time to determine an inflection point on the graph of neurotransmitter level, and wherein the inflection point is used to determine the  
10 therapeutic range.

52. The method of claim 51, further comprising the step of increasing or decreasing the amount of amino acid precursor in the administration step to maintain the level of neurotransmitter in the therapeutic range.

15 53. A method of treating a human being for obesity, panic disorder, obsessive-compulsive disorder, Parkinson's disease or the like based on catecholamine-serotonin neurotransmitter dysfunction, comprising the steps of:

- 20 a. performing a first assay of a body fluid of a patient to determine a baseline neurotransmitter level in the body fluid, the assay being a urinary assay and the urine sample being collected from the patient about 5-6 hours before the patient's bedtime;

- b. administering an amino acid precursor of a neurotransmitter to the subject;
- c. administering a second assay of a body fluid of the subject to determine whether the neurotransmitter level in the body fluid is within a predetermined therapeutic range of neurotransmitter levels; wherein the administration step is repeated with increasing amounts of amino acid precursors, each administration step being followed by an assay step; and
- d. graphing neurotransmitter level over time to determine an inflection point on the graph of neurotransmitter level, and wherein the inflection point is used to determine the therapeutic range.